



CATALOGUE OF THE
SCHOOL OF
PUBLIC HEALTH



VOLUME IV

FEBRUARY, 1918

NUMBER 1

HARVARD UNIVERSITY
AND THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CATALOGUE
AND
ANNOUNCEMENT

1918-19

PUBLISHED BY THE
HARVARD-TECHNOLOGY
SCHOOL OF PUBLIC HEALTH

240 LONGWOOD AVENUE, BOSTON, MASS.

1918

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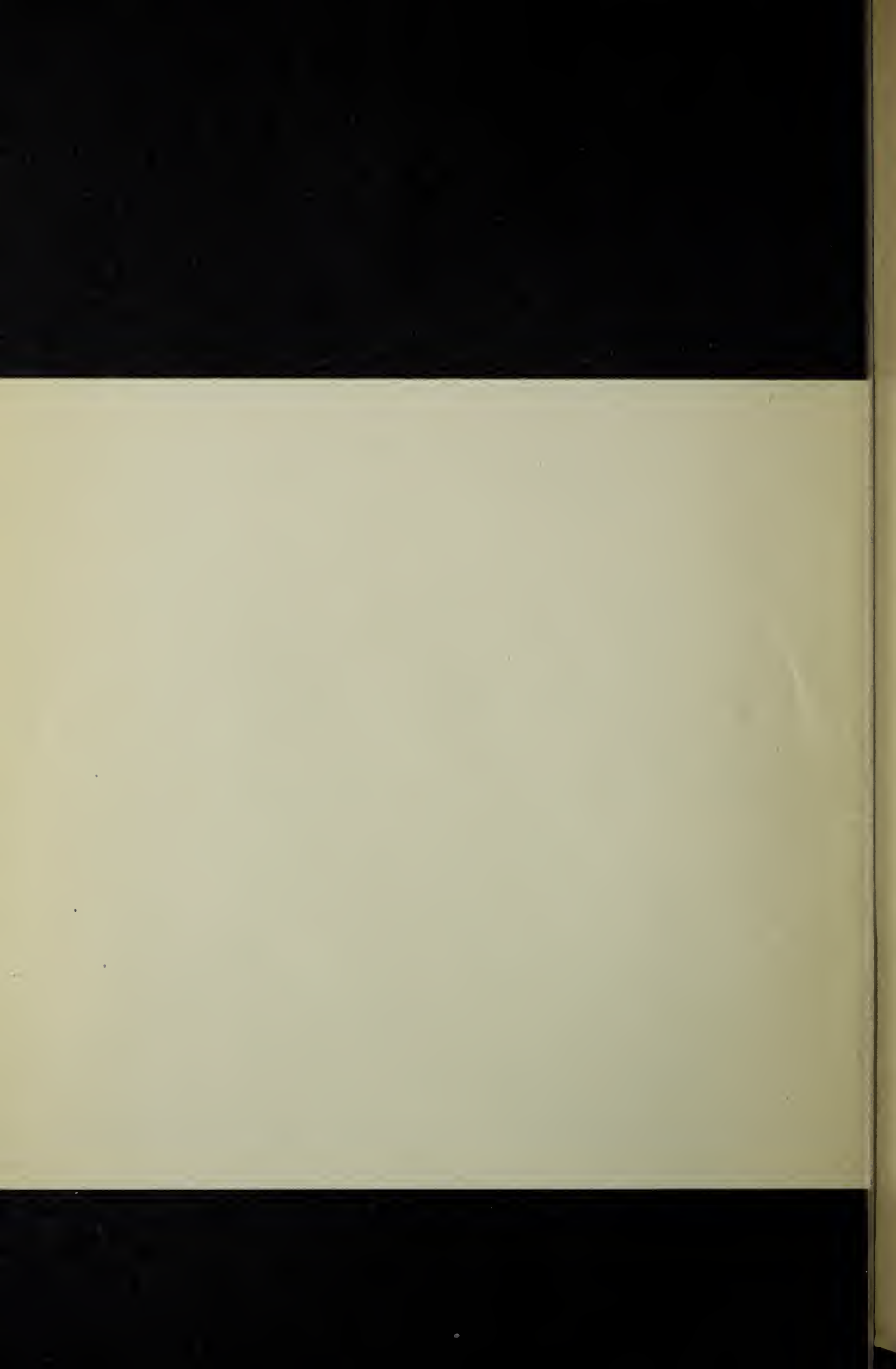
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CHANGE OF NAME

THE School—hitherto known as the School for Health Officers—will in future bear the name of the SCHOOL OF PUBLIC HEALTH of Harvard University and the Massachusetts Institute of Technology.

The reason for this change is that some misapprehension has occurred concerning its object and scope due to a mistaken idea that it is devoted solely to the training of administrative heads of Boards and Departments of Health. A glance at the positions held by graduates and other former students of the School (see pp. 000) will suffice to dispel this idea. As a matter of fact, laboratorians—including bacteriologists, chemists and pathologists—sanitary engineers, epidemiologists, and the various inspectors and other officers attached to Boards of Health belong in the same general category as the executive officers and are, like them, health officers or officials.

It will be the object of the School, as heretofore, to promote the theory and the practice of public health science by investigation and instruction, and to prepare for the public service health officials of various kinds.



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OF
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AND THE
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SCHOOL OF PUBLIC HEALTH
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CONTENTS

	PAGE
CALENDAR	4
ORGANIZATION	5
STAFF OF INSTRUCTORS	6
GENERAL INFORMATION	8
REQUIREMENTS FOR ADMISSION	9
ADMISSION OF WOMEN	10
APPLICATION AND REGISTRATION	10
CERTIFICATE	10
FEES	11
DIVISION OF STUDIES	11
REQUIRED WORK	11
SCHEDULE OF COURSES — STUDENTS WITH MEDICAL DEGREES .	12
SCHEDULE OF COURSES — STUDENTS WITHOUT MEDICAL DEGREES	13
EXAMINATIONS	14
RESEARCH PROBLEM	14
SPECIAL LECTURES AND SEMINARIES	15
ADDITIONAL COURSES	15
DESCRIPTION OF COURSES	16
FIVE O'CLOCK LECTURES	23
REGISTER OF STUDENTS 1917-18	24
REGISTER OF GRADUATES	26
FORMER SPECIAL STUDENTS	30

CALENDAR

1918

- Sept. 21, Saturday . . .* Last Day for Registration and Presentation of Schedule of Courses for Approval.
- Sept. 23, Monday . . .* First Term begins. Payment of first instalment of the tuition fee is required on or before this date.
- Oct. 12, Saturday* Columbus Day.
- Nov. 28, Thursday* Thanksgiving Day.
- Dec. 20-26, Friday to Thursday . . .* Technology Christmas Recess.
- Dec. 21-Jan. 2, Saturday to Thursday .* Harvard Christmas Recess.

1919

- Jan. 15-25, Wednesday to Saturday .* Technology Recess.
- Feb. 1, Saturday* Second Term begins. Payment of second instalment of the tuition fee is required on or before this date.
- Feb. 22, Saturday* Washington's Birthday.
- Apr. 13-19, Sunday to Saturday . .* Harvard Recess.
- Apr. 17-19, Thursday to Saturday .* Technology Recess.
- May 30, Friday* Memorial Day.

THE SCHOOL OF PUBLIC HEALTH

HARVARD UNIVERSITY AND THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

ABBOTT LAWRENCE LOWELL, LL.D., Ph.D., *President of Harvard University.*

RICHARD COCKBURN MACLAURIN, LL.D., Sc.D., *President of the Massachusetts Institute of Technology.*

The names of the Administrative Officers and Governing Boards of Harvard University will be found in the Official Register of Harvard University; and of the Administrative Officers and Governing Boards of the Massachusetts Institute of Technology, in the Official Bulletin of the Massachusetts Institute of Technology.

MILTON J. ROSENAU, M.D., A.M., *Director.*

ADMINISTRATIVE BOARD

WILLIAM T. SEDGWICK, Sc.D., *Chairman.*

MILTON J. ROSENAU, M.D., A.M., *Director.*

GEORGE C. WHIPPLE, S.B., *Secretary.*

OFFICE HOURS

The office of the School of Public Health is at the office of the Director, Professor ROSENAU, Harvard Medical School, Building E, Room 238, 240 Longwood Avenue, Boston, where the business of the School is conducted.

The office of the Chairman, Professor SEDGWICK, is at Room 10-405, Massachusetts Institute of Technology, Charles River Road, Cambridge.

The office of the Secretary, Professor WHIPPLE, who is also acting as Treasurer, is at Room 212, Pierce Hall, Oxford Street, Cambridge.

OFFICERS OF INSTRUCTION AND LECTURERS

*(Arranged alphabetically)*LOUIS BELL, PH.D., *Consulting Electrical Engineer.*ROBERT P. BIGELOW, S.B., PH.D., *Associate Professor of Zoölogy and Parasitology, Massachusetts Institute of Technology.*JOSÉ PENTEADO BILL, A.B., M.D., *Instructor in Preventive Medicine and Hygiene, Harvard University.*WILLIAM EUSTIS BROWN, PH.B., C.P.H., *Instructor in Public Health Administration, School of Public Health.**HUGH CABOT, A.B., M.D., *Assistant Professor of Genito-Urinary Surgery, Harvard University.**RICHARD C. CABOT, A.B., M.D., *Assistant Professor of Medicine, Harvard University.*IDA CANNON, *Head Worker, Social Service Department, Massachusetts General Hospital.**WALTER B. CANNON, A.M., M.D., *George Higginson Professor of Physiology, Harvard University.*CHARLES V. CHAPIN, M.D., S.D., *Superintendent of Health, Providence, R. I.*WILLIAM T. COUNCILMAN, M.D., A.M., LL.D., *Shattuck Professor of Pathological Anatomy, Harvard University.*DAVID L. EDSALL, A.M., M.D., S.D., *Jackson Professor of Clinical Medicine, Harvard University.*HAROLD C. ERNST, M.D., A.M., *Professor of Bacteriology, Harvard University.*WALTER E. FERNALD, A.B., M.D., *Superintendent, Massachusetts School for the Feeble-Minded.*OTTO FOLIN, S.B., PH.D., *Hamilton Kuhn Professor of Biological Chemistry, Harvard University.*†SELSKAR M. GUNN, S.B., *Associate Professor of Sanitary Biology and Public Health, Massachusetts Institute of Technology.*JOHN B. HAWES, 2D, A.B., M.D., *Secretary, Board of Trustees, Massachusetts Hospital for Consumptives.*EUGENE R. KELLEY, M.D., *Director of the Division of Communicable Diseases, Massachusetts State Department of Health.*

* Absent on War Service.

† Absent on Red Cross Service.

- ROBERT W. LOVETT, A.B., M.D., *John B. and Buckminster Brown Professor of Orthopedic Surgery, Harvard University.*
- HERMANN C. LYTHGOE, *Director of the Division of Food and Drugs, Massachusetts State Board of Health.*
- ALLAN J. McLAUGHLIN, M.D., *Assistant Surgeon General, U. S. Public Health Service, Former Health Commissioner, Massachusetts State Department of Health.*
- GEORGE B. MAGRATH, M.D., *Medical Examiner of Suffolk County.*
- FRANK B. MALLORY, A.M., M.D., *Associate Professor of Pathology, Harvard University.*
- JOHN L. MORSE, A.M., M.D., *Professor of Pediatrics, Harvard University.*
- EDWARD MUELLER, Ph.D., *Assistant Professor of Inorganic Chemistry, Massachusetts Institute of Technology.*
- EDWIN H. PLACE, M.D., *Assistant Professor of Pediatrics, Harvard University, and Physician-in-Chief, South Department, Boston City Hospital.*
- *WILLIAM H. POTTER, D.M.D., *Professor of Operative Dentistry, Harvard University.*
- SAMUEL C. PRESCOTT, S.B., *Professor of Industrial Microbiology, Massachusetts Institute of Technology.*
- MILTON J. ROSENAU, M.D., A.M., *Professor of Preventive Medicine and Hygiene, Harvard University.*
- M. VICTOR SAFFORD, M.D., *Epidemiologist, Board of Health, Boston.*
- WILLIAM T. SEDGWICK, Ph.D., Sc.D., *Professor of Biology and Public Health, Massachusetts Institute of Technology.*
- A. WATSON SELLARDS, A.M., M.D., *Associate in Tropical Medicine, Harvard University.*
- FRANCIS H. SLACK, M.D., *Instructor in Public Health Laboratory Methods, Massachusetts Institute of Technology.*
- PERDY G. STILES, S.B., Ph.D., *Instructor in Physiology, Harvard University and Radcliffe College.*
- RICHARD P. STRONG, Ph.B., M.D., S.D., *Professor of Tropical Medicine, Harvard University.*
- CLAIR E. TURNER, A.M., *Instructor in Biology, Massachusetts Institute of Technology.*

* Absent on War Service.

ERNEST E. TYZZER, M.D., *Assistant Professor of Pathology, Harvard University.*

FREDERICK H. VERHOEFF, A.M., M.D., *Assistant Professor of Ophthalmic Research, Harvard University.*

*EUGENE WAMBAUGH, A.M., LL.B., LL.D., *Langdell Professor of Law, Harvard University.*

WOLFERT G. WEBBER, A.B., M.D., *Charles Follen Folsom Teaching Fellow in Hygiene, Harvard University.*

GEORGE C. WHIPPLE, S.B., *Gordon McKay Professor of Sanitary Engineering, Harvard University and Massachusetts Institute of Technology.*

MELVILLE C. WHIPPLE, *Instructor in Sanitary Biology, and Sanitary Inspector, Harvard University.*

S. BURT WOLBACH, M.D., *Associate Professor of Bacteriology, Harvard University.*

ALPHEUS G. WOODMAN, S.B., *Associate Professor of the Chemistry of Foods, Massachusetts Institute of Technology.*

GENERAL INFORMATION

The School of Public Health is conducted by Harvard University and the Massachusetts Institute of Technology through an Administrative Board appointed for this purpose by both institutions.

The principal object of the School is to prepare young men and women for public health work and especially to fit them to occupy administrative, executive, or laboratory positions, as health officials, or as members of boards of health, or secretaries, agents, laboratory workers, or inspectors of health organizations. To this end, lectures, laboratory work, and other forms of instruction are offered by both institutions, and by special instructors from national, state, and local health agencies. The subjects embraced in the courses of study have been selected to cover a wide range, including medical, biological, sanitary, hygienic and engineering sciences, together with practical public health administration and research.

It is recognized that the requirements for public health service are broad and varied, and that the country needs leaders in every community fitted to guide and instruct the people in the art of hygienic living, qualified to direct the expenditure of energy, time, and money in public health work into fruitful channels, and able to initiate plans to meet novel conditions as they arise. It is the object of the School

* Absent on War Service.

of Public Health to provide the scientific ground work of expert knowledge which underlies efficient health administration, together with some actual personal acquaintance with the theory and practice of modern public health service of the best types.

Harvard University with its extensive resources affords ample opportunities for students to prepare themselves in the medical aspects of public health, work. The Massachusetts Institute of Technology with its courses in sanitary and municipal engineering, bacteriology, and public health, presents the engineering and laboratory phases, as well as the important subjects of vital statistics and demography. The State of Massachusetts and the City of Boston afford unusual opportunities to study the operation and administration of a state and a municipal department of health, including hygienic laboratory work. In connection with the port of Boston the United States Public Health Service maintains a Marine Quarantine, Immigration, and Medical Service. The School of Public Health is in a unique position in being able to offer all of these and many other special opportunities for public health practice.

REQUIREMENTS FOR ADMISSION

Students are admitted to the School of Public Health with various degrees of preliminary training. The time which may be required to obtain the Certificate in Public Health will be largely dependent upon the preliminary training of the applicant. Students with a medical degree require at least one year in residence. Other students require two or more years.

Students are admitted to the School if they have satisfactorily completed two years work in a recognized medical school, or if they have received a bachelor's degree from a recognized college or technical school, or if they have had special experience in public health work, provided they have pursued satisfactory courses in physics, chemistry, biology, and modern languages.

The medical degree is not a prerequisite for the Certificate in Public Health, but candidates are advised to obtain the medical degree if possible before specializing in public health work. Experience teaches that at the present time preferment for employment and advancement to the higher positions come more readily to those who possess a medical degree.

Special students, not candidates for the Certificate in Public Health, who desire to fit themselves for some particular field will be admitted to the School, and may take any course or courses for which they are properly qualified, on approval of the Administrative Board.

ADMISSION OF WOMEN

Women are admitted to the School of Public Health on the same terms as men, and are equally eligible for the Certificate in Public Health. They are admitted to many of the courses given in the Harvard Graduate School of Medicine and to all courses at M. I. T.

The world war has created an unusual opportunity for women to enter upon public health work, and there is every indication that much of the work in this field now done by men must soon be taken up by women, or left undone. Laboratorians, public health nurses, and inspectors of various kinds, seem likely in the first instance to be in special request.

APPLICATION AND REGISTRATION

Application for admission to the School should be made to the Director, and should be accompanied by a full statement of the applicant's qualifications, including his or her academic history together with such certificates from other institutions as the Administrative Board may require.

Each student before being admitted to courses of instruction must register at the office of the Director and obtain a card, to be presented to instructors.

Students in the School of Public Health are registered as students of both Harvard University and the Massachusetts Institute of Technology.

CERTIFICATE

The Certificate in Public Health (C. P. H.) will be granted to candidates * who have satisfactorily completed the studies of their approved schedule, who have spent not less than one academic year in residence, and who have otherwise complied with all requirements. This certificate is issued by Harvard University and the Massachusetts Institute of Technology and signed by the President of each institution and by the members of the Administrative Board.

* Students who enter the School for the purpose of taking special studies, are not regarded as candidates.

FEEES

The tuition fee for candidates for the Certificate in Public Health and for all other students pursuing regular courses in the School is \$250 per year and must be paid in advance as follows: — \$150 on or before the first day of the first term, and \$100 on or before the first day of the second term. For one-half of the school year the fee is \$150.

Special students who do not pay the regular fee must pay a special fee for each course.

A deposit of \$25 is required against charges for breakage in the laboratories, of which any balance remaining at the end of the year will be returned. There are no extra laboratory fees for instruction taken in course.

All fees must be paid to Professor Whipple, Treasurer of the School. Checks should be made payable to the School of Public Health.

DIVISION OF STUDIES

Two programs or schedules of studies are provided in the School, one for students who have previously obtained the medical degree and one for students who have not obtained the medical degree. All candidates for the Certificate in Public Health must follow one or the other of these schedules, and in addition may take a certain number of elective courses. Students who do not follow one or the other of these schedules will be classified as special students, and will not be considered as candidates for the Certificate in Public Health.

REQUIRED WORK

The schedules of courses, which must be completed by candidates for the C. P. H. are indicated on page 12. In addition to this required work, each student may select courses, known as elective courses, but in no case shall the total number of hours taken exceed *thirty hours a week* except by special vote of the Administrative Board. After such optional courses have been elected the student must complete these courses, and will in no case be allowed to change them without a vote of the Administrative Board.

SCHEDULE OF COURSES FOR STUDENTS HOLDING MEDICAL DEGREES ¹

(See description of courses, page 16)

FIRST TERM

Course No.	Subject	Hours per week	Duration of Course
411	Laboratory Technique	Six	Entire term
711	Municipal Sanitation	Three	Entire term
810	Vital Statistics	Four	Entire term
112	Epidemiology and Public Health Problems	Three	First half-term, followed by 210
210	Personal Hygiene	Three	Second half-term
111b	Preventive Medicine and Hygiene	Six	Entire term
610	Clinical Course in Communicable Diseases	Three	Second half-term
X	Thesis		

Electives

Courses may be elected from the following group, but in no case shall the total number of hours (not including Thesis) exceed thirty hours per week.

612	Biology of Infectious Diseases	Two	Entire term
421	Food Analysis	Three	Entire term
313	Public Health Field Work	Six	Half term
412	Wasserman Laboratory Work	Six	Half term

SECOND TERM

418	Public Health Laboratory Methods	Six	Entire term
110	Principles of Sanitary Science and Public Health	One	Entire term
111a	Preventive Medicine and Hygiene	Two	First half term
310	Public Health Administration	Four	First half-term
211	Industrial Hygiene and Sanitation	Four	Second half-term
X	Thesis	Nine	Entire term

Electives

Thirty hours a week limit excluding Thesis.

314	Social Service	Six	Half term
311	Practical Health Administration	Six	Half term
612	Biology of Infectious Diseases	Two	Entire term

¹ Students with medical degrees usually obtain the Certificate in Public Health after one year's residence.

**** SCHEDULE OF COURSES FOR STUDENTS NOT
HOLDING MEDICAL DEGREES**

(See description of courses, page 16)

FIRST YEAR

FIRST TERM

Course No.	Subject	Hours per week	Duration of Course
411	Laboratory Technique	Six	Entire term
711	Municipal Sanitation	Three	Entire term
415	Vertebrate Anatomy	Six	Entire term
416	Biology	Three	Entire term
612a	Biology of Infectious Diseases	Two	Entire term
112	Epidemiology and Public Health Problems	Three	First half-term, fol- lowed by 210
210	Personal Hygiene	Three	Second half-term

Electives

Public Health Field Work.
Wasserman Laboratory Work.

SECOND TERM

418	Public Health Laboratory Methods	Six	Entire term
110	Principles of Sanitary Science and Public Health	One	Entire term
417	Embryology and Histology	Seven	Entire term
419	Physiology	Six	Entire term
420	Physiological Laboratory	Three	Entire term

Electives

Courses may be elected from the following group, but in no case shall the total number of hours exceed thirty per week.

421	Food Analysis	Three	Entire term
314	Social Service	Six	Half term

**** Students who do not hold a medical degree or the degree of S.B. in Biology and Public Health, M. I. T. are expected to spend two years or more in residence before the Certificate in Public Health will be granted.**

SECOND YEAR

FIRST TERM

Course No.	Subject	Hours per week	Duration of Course
423	Pathology	Twenty-four	Entire term
810	Vital Statistics	Four	Entire term
111b	Preventive Medicine and Hygiene	Six	Entire term
610	Clinical Course in Communicable Diseases	Three	Second half-term

SECOND TERM

111a	Preventive Medicine and Hygiene	Two	First half-term
310	Public Health Administration	Four	First half-term, followed by 211
211	Industrial Hygiene and Sanitation	Four	Second half-term
	Thesis	Fifteen	Entire term
311	Practical Health Administration	Six	Entire term

Electives

SS	Social Service	Six	Half term
HL	Hygienic Laboratory Work	Six	Half term

EXAMINATIONS

Written examinations may be given by the various instructors during or at the end of their particular courses. On the completion of the work of each term every student in the School must also present himself before the members of the Administrative Board for an oral examination on the work just completed. In the case of those students, who present themselves for final examination, there will be a general oral examination covering all of the work taken during residence in the School.

RESEARCH PROBLEM

No student will be granted a Certificate in Public Health, who has not during his residence in the School completed a satisfactory thesis. This must be presented to the Administrative Board in due form and must have received the approval of the Board before the final examination will be given. This original work may be in the nature of a sanitary survey, a detailed study of some particular problem in public health, or an original piece of laboratory investigation. All subjects must be first approved by the Administrative Board.

SPECIAL LECTURES AND SEMINARIES

In addition to the courses already indicated series of special lectures will be given at various times during the year. In most instances the lectures will be given from five to six o'clock. These lectures will require no preparation on the part of the student, but are designed to familiarize him with various fields of activity, related to public health work. The lecturers in each instance will be experts, who are actively engaged in practical work. A list of such lectures will be found on page 23.

Seminaries are held by the Director on the second and fourth Thursdays of each month throughout the year. At these seminars current literature and original work will be reviewed by members of the instructing staff and by members of the School of Public Health. Such lectures and seminars are a part of the regular work of the School and attendance is expected of all students.

These courses are not reckoned in the total number of hours allowed in selecting elective courses, nor do they count toward the certificate in public health.

ADDITIONAL COURSES

Students may take other courses at Harvard University or at the Massachusetts Institute of Technology, but in all such cases registration must be made through the office of the Director. For additional courses consult catalogues of the two institutions.

DESCRIPTION OF COURSES

The courses are here arranged according to groups. Complete descriptions are given only of those courses which are offered as required courses or as elective courses. Courses of interest to special students or to regular students having time for extra work are listed by title only. Description of these may be found in the catalogues of the institutions.

PREVENTIVE MEDICINE AND SANITARY SCIENCE

110. *Principles of Sanitary Science and Public Health.* (Course, M. I. T. 756.) (Required.)

One hour per week second term.

Given at M. I. T.

Professor W. T. SEDGWICK.

Fifteen lectures (richly illustrated by stereopticon, diagrams, and charts). The principal topics dealt with are health and disease; ancient and modern theories of disease; parasitism; toxins and antitoxins; theories of vital resistance, immunity, etc.; vaccination; epidemiology; and preventive sanitation of water supplies, milk supplies and waste disposal.

111a. *Preventive Medicine and Hygiene.* (Required.)

Two hours per week first half second term.

Given at Harvard Medical School.

Professor M. J. ROSENAN.

This is a seminary course given especially for students in the School of Public Health. The course is designed to take up a careful consideration of the chemistry and action of disinfectants, and to cover other work in preventive medicine of especial interest to health officers, which work cannot be taken up in course 111b owing to lack of time.

111b. *Preventive Medicine and Hygiene.* (Required.)

Six hours per week first term.

Given at the Harvard Medical School, Lecture Room, Bldg. E.

Professor M. J. ROSENAN and assistants.

This is a general course, consisting of lectures and demonstrations, and laboratory work designed to give a bird's-eye view of the important facts and principles in preventive medicine. The subjects covered are those found in Rosenan's "Preventive Medicine and Hygiene."

The Thursday Evening Journal Club is also included as a part of this course.

112. *Epidemiology and Public Health Problems.* (Required.)

Three hours per week first half of first term.

Given at M. I. T.

Professor W. T. SEDGWICK.

The course is essentially one in the theory and practice of Hygiene and Sanitation, with discussions of the origin and trend of the underlying principles of sanitary science, public health science and vital statistics.

It includes a detailed consideration of the natural history of epidemics, especially of typhoid fever, tuberculosis, scarlet fever, etc., in reference to public water supplies, milk supplies, and similar causative factors; and to current problems of public health science and practice; the intention being to enable the student by a critical consideration of instructive examples to prepare himself for the interpretation of corresponding cases arising in public health practice.

114. *General Course in Tropical Medicine.*

(Offered by the School of Tropical Medicine, and open to students registered in the School of Public Health.

Given at the Harvard Medical School on dates to be announced.

Professor RICHARD P. STRONG.

PERSONAL HYGIENE

210. *Personal Hygiene.* (Required.)

Three hours per week second half first term.

Given at M. I. T.

Professor W. T. SEDGWICK.

Lectures designed to give an accurate idea of the proper operation and care of the human mechanism. The course includes a thorough discussion of such topics as the choice of foods, the effects of good and bad air upon the body, muscular activity, fatigue, sleep, rest, recreation, the care of the eyes and other sense organs, bathing and baths, the dangers of sedentary life, and similar subjects.

211. *Industrial Hygiene and Sanitation.* (Required.)

Four hours per week second half term.

Given at M. I. T.

The course deals with the various prejudicial effects of factory life upon health, including occupational accidents, industrial poisonings and the effects of defective ventilation and of dusty trades upon the prevalence of tuberculosis and other diseases. The principles are discussed by which these dangers can be minimized under existing conditions of American factory life.

PUBLIC HEALTH ADMINISTRATION

310. *Public Health Administration.* (Required.)

Four hours per week first half of second term.

Given at Harvard Medical School.

Mr. W. E. BROWN.

Lectures given on the administrative control of the various communicable diseases, as well as public health field work. Organization of Federal, State, and Municipal Departments of health is also taken up and analyzed. The general object of this course is to correlate the work of the laboratory with the field work of the health department.

311. *Practical Health Administration.* (Optional.)

Six hours per week second half second term.

Special Exercises arranged to be given at the State Department of

Health, by Dr. ALLAN J. McLAUGHLIN, Dr. EUGENE R. KELLEY, Mr.

H. C. LYTHGOE, and other Directors of Divisions.

313. *Public Health Field Work.* (Optional.)

Six hours per week half second term.

Given at M. I. T.

Mr. C. E. TURNER.

This course is designed to familiarize the student with sanitary inspection work. Frequent excursions will be made to inspect watersheds, water and sewage purification plants, markets, dairies, and other institutions which may come under the supervision of the health department. Detailed, orderly and critical reports prepared and submitted by the students comprise an important part of the course.

314. *Social Service Work.* (Optional.)

Six hours per week half term.

Given at the Massachusetts General Hospital.

Miss IDA C. CANNON and assistants.

Lectures, talks, and demonstrations will be given to show the practical relationship between the work of the social service worker and the public health worker. Clinics will also be given in those diseases which are of particular interest to students in public health.

LABORATORY COURSES

411. *Laboratory Technique.* (Required.)

Six hours per week first term.

Given at Pierce Hall, Harvard College.

Mr. M. C. WHIPPLE.

The purpose of this course is to give training in the fundamentals of laboratory methods, both bacteriological and chemical. As an elementary course it prepares the student for his later work. The work includes a critical review, the use of the chemical balance, the preparation and standardization of reagents, quantitative analysis, the use of the microscope, the preparation of culture media, the use of incubators, the equipment of laboratories and the elements of general bacteriology.

412. *Wasserman Laboratory Work.* (Optional.)

Six hours per week half of first term.

Given at Harvard Medical School.

Dr. W. A. HINTON.

The work in this course includes lectures, demonstrations, and actual laboratory work. It is designed to give the student a general knowledge of and training in the Wasserman technique.

413. *Elementary and General Bacteriology.*

Daily except Saturday during October and November from 2 to 5.30 P.M.

Given at the Harvard Medical School.

Professors HAROLD C. ERNST, S. B. WOLBACH, and others.

414. *Control of City Milk Supplies.* (Course, M. I. T. 743.)

Given at M. I. T.

Professor S. C. PRESCOTT.

415. *Vertebrate Anatomy.* (Required of non-medical students.)

Seven hours per week first term.

Given at M. I. T.

Professor R. P. BIGELOW.

A course on the comparative anatomy of vertebrates, including man. Designed to give the student a grasp of the structure of the vertebrates, and a sufficient knowledge of mammalian (including human) anatomy to form a sound basis for subsequent study of physiology, pathology, and personal hygiene.

416. *General Biology.* (Required of non-medical students.)

Four hours per week first term.

Given at M. I. T.

An introduction to the study of living things. It consists essentially of a general discussion of the fundamental facts and principles common to all the biological sciences, illustrated and made real by careful laboratory examination of selected and typical plants and animals. The course is elementary and preparatory in character and aim, and is a necessary prerequisite for more advanced subjects.

417. *Embryology and Histology.* (Required of non-medical students.)

Seven hours per week second term.

Given at M. I. T.

Professor R. P. BIGELOW.

A continuation of the course in Vertebrate Anatomy of the first term treating of the development of the body and the microscopical anatomy of each of the principal organs. An important feature is practice in embryological and histological technique. Each student makes a series of preparations for his own use. This with the preceding course affords valuable preparation for the study of human anatomy, as well as of hygiene and public health.

418. *Public Health Laboratory Methods.* (Required.)

Six hours per week second term.

Given at M. I. T.

Dr. F. H. SLACK.

In this course the practical methods in use in state and municipal bacteriological laboratories are emphasized. Training is given in the cultural diagnosis of diphtheria, examination of specimens for tuberculosis, the Widal reaction in typhoid fever, the microscopical diagnosis of malaria, the complement fixation test, etc.

419. *Physiology.* (Required of non-medical students.)

Six hours per week second term.

Given at M. I. T.

A broad but thorough elementary treatment of the subject, based upon anatomy, histology, chemistry and physics. Lectures and recitations, supplemented by constant quizzing and discussions.

420. *Physiological Laboratory.* (Required of non-medical students.)

Two hours per week second term.

Given at M. I. T.

The usual demonstrations and experiments personally performed by the students upon muscle and nerve, etc.

421. *Food Analysis.* (Optional.)

Three hours per week first or second term.

Given at M. I. T.

Professor A. G. WOODMAN.

Lectures and laboratory work dealing with the character, purity, and nutritive value of common food materials and with food adulteration.

422. *Hygienic Laboratory Methods.* (Optional.)

Given at State Hygienic Laboratory.

Dr. M. J. ROSENAU and assistants.

Students will be allowed to elect this course, who show particular aptitude for work in preparation of vaccines, serums, and antitoxins. It will require at least a month of service at the hygienic laboratory.

423. Pathology. (Required of non-medical students.)

Twenty-four hours per week.

Given at Harvard Medical School.

Dr. WM. T. COUNCILMAN and assistants.

COMMUNICABLE DISEASES

610. Communicable Diseases. — Clinical Course. (Required.)

Three hours per week second half of first term.

Given at the South Department, Boston City Hospital, 745 Massachusetts Ave.

Dr. EDWIN H. PLACE, Assistant Professor of Pediatrics, Harvard Medical School, and Physician-in-Chief, South Department, Boston City Hospital.

This course offers an opportunity for the study of the more common contagious diseases, more especially measles, scarlet fever, diphtheria, whooping cough, etc. Their recognition, variation, complications, manner of spread and treatment will be studied at the bedside and in short conferences after the ward visits. The results of treatment and management will be considered both from series of cases in the wards, and from the incidence and mortality in the city as a whole.

611. Communicable Diseases. — Internship.

For qualified students registered in the School of Public Health.

One to four months, as arranged by agreement.

South Department, Boston City Hospital, 745 Massachusetts Ave.

612. Biology of Infectious Diseases. (Required of non-medical students.)

Four hours per week first term.

Given at M. I. T.

Dr. F. H. SLACK.

This course deals with the fundamental biological facts of infection, resistance, and immunity. It also deals specifically with the biological characteristics of infectious disease of special interest to the sanitarian, such as trichinosis, anthrax, typhoid fever, diphtheria, scarlet fever, etc.

SANITARY AND MUNICIPAL ENGINEERING

710. *Sanitary Engineering.* (Courses, M. I. T. 177 and 178.)

Three exercises a week throughout the year.

Given at M. I. T.

Professor WHIPPLE and assistants.

711. *Municipal Sanitation.* (Required.)

Three hours per week first term.

Given at M. I. T.

Professor G. C. WHIPPLE and assistants.

This course will deal with the underlying principles of sanitary engineering and municipal sanitation. The topics considered will include city planning, housing, fire prevention, street paving, public water supplies and water purification, the pollution of streams, methods of sewage disposal, garbage disposal, street cleaning, hygienic housing, plumbing, ventilation, the effect of insanitary conditions on the public health. Attention will be given to the operation, cost, and efficiency of works rather than to construction.

712. *Research in Sanitation.* (Harvard University, Hygiene and Sanitation, 20a.)

Professor WHIPPLE.

DEMOGRAPHY

810. *Vital Statistics.* (Course, M. I. T. 190.) (Required.)

Four hours per week first term.

Given at M. I. T.

Professor WHIPPLE and assistants.

A course in vital, social, and sanitary statistics arranged especially for students who intend to enter the public health service. It will treat of the principles of statistics, population, registration, births and marriages, general death rates, specific death rates, morbidity, causes of death, preparation of tables, plotting, construction of diagrams, graphical display of data, and, in general, the application of statistics to state and municipal problems.

811. *Research in Demography.*

For students registered in the School of Public Health.

Given at Harvard University, Cambridge, during the second term on dates to be announced.

Professor WHIPPLE and assistants.

SPECIAL LECTURES

Students do not register for the following lecture courses. From one to six lectures will be given on each of the following subjects. The usual hour for lectures is from five to six o'clock. The dates and places will be announced in due season. All students are required to attend.

In 1916-17 these lectures were as follows:

Infant Mortality	Professor JOHN L. MORSE
Legal Medicine	Dr. GEORGE B. MAGRATH
Medical Inspection of Aliens	Dr. M. V. SAFFORD
Municipal Sanitation	Dr. C. V. CHAPIN
Ocular Hygiene	Dr. F. H. VERHOEFF and Dr. LOUIS BELL
Oral Prophylaxis	Professor W. H. POTTER
Posture and Deformities	Professor R. W. LOVETT
Sanitary Law—Legal Powers of Health Officers	Professor EUGENE WAMBAUGH
Social Service Work	Professor RICHARD C. CABOT
Tuberculosis	Dr. J. B. HAWES, 2d.
Venereal Prophylaxis	Dr. HUGH CABOT

STUDENTS 1917-18

- Bonnier, Joseph Wilfrid, B.M., M.D., D.P.H. 70 Astor St., Boston.
 B.M. (*Laval University*) 1897.
 M.D. (*Laval University*) 1899.
 D.P.H. (*Laval University*) 1914.
 Assistant Inspector of Board of Health of Province of Quebec,
 1899-1908.
 Recorder of Vital Statistics of Province of Quebec, 1908-18.
- Foley, Frederic Joseph, A.B. 14 Union Ave., Framingham, Mass.
 A.B. (*St. Francis Xavier, Nova Scotia*) 1913.
 Laboratory Assistant and Instructor in Chemistry, Boston College,
 1913-17.
 Special Student, School of Public Health, October-December,
 1917.
- Harkness, Robert Rae, Ph.B. York Village, Maine.
 Ph.B. (*Yale University*) 1914.
 Editorial Assistant, American Journal of Public Health, 1917-.
 Health Officer, York, Maine, 1917-.
- Hart, Clarence Dunbar, S.B. 35 Charnwood Rd, W. Somerville, Mass.
 S.B. (*Tufts*) 1917.
 Instructor in Biology, Milton Academy, Milton, Mass.
- Hedrich, Arthur William, S.B. 126 Massachusetts Ave., Boston.
 S.B. (*Northwestern University*) 1914.
 Health Inspector and Assistant Bacteriologist, Evanston, Ill., 1912-
 14.
 Chemist, Bacteriologist and Health Inspector, East Chicago, Ind.,
 1914-16.
 Editor, American Journal of Public Health, 1917-.
 Secretary, American Public Health Association, 1917-.
- Horowitz, Murray Philip, S.B., S.M. 76 Hammond St., Cambridge,
 Mass.
 S.B. (*College of the City of New York*) 1913.
 S.M. (*Massachusetts Institute of Technology*) 1916.
 Editorial Assistant, American Journal of Public Health.
 Instructor in Biology and Public Health, Mass. Institute of Tech-
 nology, 1917-.
- Knowlton, Millard, M.D. 356 Commonwealth Ave., Boston.
 M.D. (*Medical College of Indiana*) 1905.
 Professor of Physiology, Terre Haute Veterinary College, 1909-10.

- Lecturer on Tuberculosis, New York City, 1910-11.
 Tuberculosis Inspector, New Jersey State Board of Health, 1911-13.
 Director of Tuberculosis Work, (*ibid.*) 1913-15.
 Chief of Bureau of Education and Publicity, (*ibid.*) 1915-17.
- Little, Harold Greenleaf, S.B. 70 Purchase St., Newburyport, Mass.
 S.B. (*Massachusetts Agricultural College*) 1916.
- McWhirk, Clara Viola, S.B. 42 Mt. Vernon St., Boston.
 S.B. (*Boston University*) 1917.
- Nelson, John Brockway, S.B. 53 Federal St., Newburyport, Mass.
 S.B. (*Massachusetts Agricultural College*) 1917.
- Peter, William Wesley, Ph.B., Ph.M., M.D. 122 Wellington Hill St.,
 Mattapan, Mass.
 Ph.B. (*Northwestern College*) 1904.
 Ph.M. (*ibid.*) 1906.
 M.D. (*Rush*) 1910.
 Medical Missionary, China, 1911-17.
- Ractliffe, Alice Ruth. 1 Mt. Vernon Square, Boston.
 Technician, Evans Memorial Hospital, Boston.
 Bacteriologist, W. D. Young Co., Boston.
- Rohn, Mina Mary, M.D. 52 Charlesgate East, Boston.
 M.D. (*Univ. of Michigan*) 1911.
 Teacher of Biology, 1911-17.
- Scannell, Edward John, M.D. 60 The Fenway, Boston.
 M.D. (*Dartmouth Medical College*) 1901.
 Medical Service in Philippines, 1902-03.
 Panama Government Service, 1905-11.
 Service in Brazil, 1911-12.
 County Health Officer, Colorado, 1912-13.
 Superintendent of Medical Department. United Fruit Co., 1913-17.
- Smith, Edwin Wallace, M.D. 457 Center St., Newton, Mass.
 M.D. (*Boston University School of Medicine*) 1901.
 General Practice, 1901-11.
 Special Practice, 1911-18.
- Turner, Clair Elsmere, A.B., A.M. 7 Ware St., Cambridge, Mass.
 A.B. (*Bates College*) 1912.
 A.M. (*Harvard*) 1913.
 Instructor, Massachusetts Institute of Technology, 1914-.
 Instructor in Hygiene, Tufts Medical and Dental Schools, 1917-.
 Special Field Agent, Maine State Department of Health, 1917.

REGISTER OF GRADUATES

Allen, Andrew Foster, S.B. Anniston, Ala.

C.P.H. 1915.

Assistant Health Officer, County and City Board of Health, Tuscaloosa, Ala., 1916-17.

Scientific Assistant, U. S. Public Health Service, 1917-.

Boyd, Mark Frederick, M.D., S.M. Galveston, Texas.

C.P.H. 1914.

Associate Professor of Preventive Medicine and Hygiene, University of Iowa, 1915-17.

Epidemiologist, Iowa State Board of Health, 1915-17.

Professor of Bacteriology and Preventive Medicine, Medical School, University of Texas, 1917-.

Brown, Walter Henry, M.D. Health Department, Bridgeport, Conn.

C.P.H. 1915.

Epidemiologist, Massachusetts State Department of Health, 1915-16.

Health Officer, Bridgeport, Conn., 1916-.

Member Public Health Council, Connecticut State Department of Health.

Brown, William Eustis, Ph.B. 333 Longwood Ave., Boston.

C.P.H. 1915.

Health Officer, York, Maine, 1915-16.

Instructor, School of Public Health, 1915-.

Champion, Merrill Edwin, A.B., M.D. 50 Phillips St., Wollaston.

C.P.H. 1914.

Assistant Director, Hookworm Commission (Rockefeller Sanitary Commission), North Carolina State Board of Health, 1914-15.

District Health Officer, Mass. State Department of Health, 1915-.

Cole, Ralph Waldo Emerson, M.D. Akron, Ohio.

C.H.P. 1915.

Health Officer, York, Maine, 1915-16.

Epidemiologist and Acting Health Officer, Health Department, Akron, Ohio, 1916-.

Acting Director, Division of School Medical Inspection (*ibid.*), 1917-.

- Cornelius, Albert Franklin, M.D. Newport News, Va.
C.P.H. 1915.
Sanitary Inspector, American Red Cross Sanitary Commission in Serbia, 1915-16.
Physician and Sanitarian for Berea College, Berea, Ky., 1916-17.
Acting Assistant Surgeon, U. S. P. H. Service, 1917-.
- Drury, Herbert, M.D., C.M. William Head Quarantine, Victoria, B. C.
C.P.H. 1917.
Medical Officer and Bacteriologist, William Head Quarantine, Canada, 1917-.
- Gigger, Augustus George, M.D. 29 Sessions St., Providence, R. I.
C.P.H. 1917.
Assistant Pathologist, State Board of Health, Rhode Island.
- Gunn, Selskar Michael, S.B. Paris, France.
C.P.H. 1917.
Former Secretary, American Public Health Association.
Former Editor, American Journal of Public Health.
Associate Professor of Sanitary Biology and Public Health, Massachusetts Institute of Technology.
Associate Director, Commission for the Prevention of Tuberculosis in France.
- Harmon, Gaius Elijah, M.B., M.D. 1353 E. 9th St., Cleveland, Ohio.
C.P.H. 1914.
Instructor in Hygiene and Bacteriology, School of Medicine, Western Reserve University, 1914-.
Director, Bureau of Vital Statistics, Division of Health, City of Cleveland, O., 1916-.
- Holt, William Leland, A.B., M.D. 1353 E. 9th St., Cleveland, Ohio.
C.P.H. 1914.
Health Officer, South Orange Township, N. J., 1915-16.
Assistant Bacteriologist to State Department of Health, N. Y., 1917.
Instructor in Bacteriology and Hygiene, School of Medicine, Western Reserve University, 1917-.
Acting Chief of the Bureau of Laboratories, City Health Department, Cleveland, O., 1917-.
- Hsieh, En Tseng, M.D., Dr. P. H. 3913 Woodlawn Ave., Philadelphia, Pa.
C.P.H. 1916.
Graduate Student, University of Pennsylvania Medical School, 1916-17.

- Ingham, Edward Alexander, S.B. Riverside, Cal.
 C.P.H. 1916.
 Agent of Committee on Public Health, Massachusetts Medical Society, 1916-17.
 State Health Officer, Southern District of California, 1917-.
- James, Linda, A.B. 2 Divinity Ave., Cambridge, Mass.
 C.P.H. 1917.
 Organizer of After-Care Division, Harvard Infantile Paralysis Commission, March to July, 1917.
 Executive Secretary, Harvard Infantile Paralysis Commission, July, 1917-.
- Lederer, Arthur, Chem. Eng., M.D. Morgantown, W. Va.
 C.P.H. 1917.
 Member Committee on Standard Methods of Water Analysis, American Public Health Association, 1914-.
 Director, State Hygienic Laboratory, State of West Virginia, 1917-.
- McCormick, John Joseph, M.D. Jackson, Mich.
 C.P.H. 1917.
 Epidemiologist, Health Department, City of Jackson, Mich.
- McDonald, William Joseph, A.B., M.D. Camp Greene, Charlotte, N. C.
 C.P.H. 1915.
 Graduate Student Department of Preventive Medicine, Harvard Medical School, 1915-.
 Laboratory and Research Director of Leprosy, Penikese Island, Mass., 1916-17.
 Major, M.R.C., U. S. Army, Sanitary Officer and Officer in Charge of Laboratory, Base Hospital, Camp Greene, Charlotte, N. C.
- Mitchell, Harold Hubbard, S.B., M.D. Indiana State Board of Health, Indianapolis, Ind.
 C.P.H. 1916.
 Sanitary Inspector, American Red Cross Sanitary Commission in Serbia, 1915.
 Epidemiologist, Indiana State Board of Health, 1916-17.
 First Lieutenant, M. R. C., U. S. Army, 1917-.
- Neagle, Harry Benjamin, A.B., M.D. 33 Algonquin St., Dorchester, Mass.
 C.P.H. 1914.
 Professor of Preventive Medicine, Harvard Medical School, China.

- Osborn, Stanley Hart, M.D. 19 Agassiz St., Cambridge, Mass.
C.P.H. 1915.
Sanitary Inspector, American Red Cross Sanitary Commission in Serbia, 1915-16.
District Health Officer, Mass. State Department of Health, 1916-17.
Epidemiologist, Mass. State Department of Health, 1917-.
- Paul, George Philip, M.D., Suva, Navua, Fiji Islands.
C.P.H. 1916.
Medical Officer in Charge, International Health Commission, Suva, Navua, Fiji Islands.
- Pratt, Aaron Paul, A.B. York Village, Maine.
C.P.H. 1916.
Assistant in Hygiene, Harvard College, 1916.
Health Officer, Town of York, Maine, 1916-17.
District Health Officer, Maine State Department of Health, 1917-.
- Robins, Vernon, M.D. Montgomery, Ala.
C.P.H. 1917.
Field Director of Sanitation, State Department of Health of Alabama.
- Samper, Bernardo, A.B., M.D. Bogotá, Colombia, South America.
C.P.H. 1916.
- Steelsmith, Daniel Clarence, M.D. Tuscaloosa, Ala.
C.P.H. 1917.
Assistant Health Officer, County and City Board of Health, Tuscaloosa, Ala.
- Tenney, Elmer Seth, B.L., M.D. Lincoln, Neb.
C.P.H. 1917.
Surgeon, United States Army, 1898-1916.
Commissioner, Department of Health, State of Nebraska, 1917-18.
Major, M.R.C., United States Army, 1917-.
- Wilmot, Frank Alonzo, A.B., M.D. Bethany, Neb.
C.P.H. 1917 (December).
Physician and Sanitarian to Dennison Manufacturing Co., Framingham, Mass., 1917-.

Woo, Sien-Ming, A.B., M.D. Shanghai, China.

C.P.H. 1916.

Associate Secretary, Joint Council on Public Health Education in China, 1917-.

Yen, Fu Chun, M.D. Changsha, Hunan, China.

C.P.H. 1917.

International Health Commission, Hunan, China.

FORMER SPECIAL STUDENTS

This list includes the names of all students who have registered in the School of Public Health as special students, and such students who have not for one reason or another completed their courses.

Abele, Charles Arthur, Ch.E., S.B. Anniston, Ala.

Student School of Public Health, 1916-17.

Chief Sanitary Inspector, Red Cross Sanitary Service, Anniston, Ala.

Akerley, Arthur William Kenah, M.D., C.M. 73 Gainsboro St., Boston.

Student School of Public Health.

Anti-tuberculosis Work, American Red Cross, Newport, R. I.

Bartlett, Leslie Raymond. Eastport, Maine.

Student School of Public Health.

Inspector, National Cannery Association, 1916.

Inspector in Charge, Office of Sardine Inspection, 1916-17.

Inspector and Bacteriologist, 1917-.

Bennett, Arthur King, M.D. 72 Pinckney St., Boston.

M.D. (*University of Michigan*).

Medical Missionary in Mesopotamia, 1906-16.

Special Student School of Public Health, November and December, 1916.

Bradley, John Ruskin, M.D. 331 Glenwood Ave., Rochester, N. Y.

Student School of Public Health, October-December, 1915.

Captain, M.R.C., U.S. Army, 1917-.

Ciampolini, Ettore, M.D.

Student School of Public Health, 1916-17.

Italian Army Medical Service, 1917-.

Gwinn, Van Henry, M.D. State Board of Health, Jacksonville, Fla.

Student School of Public Health, May, 1917.

District Health Officer, Florida State Board of Health, 1917-.

- Hagerty, Joseph James, M.D. 31 Day St., Norwood, Mass.
Student School of Public Health one term, 1916.
- Holloway, Howard Steele, M.D. 78 St. James Ave., Boston.
Student School of Public Health, 1915.
- Horan, Charles F. Watertown, Mass.
Student School of Public Health, 1915.
Industrial Engineer, Hood Rubber Co., Watertown, Mass., 1916-.
- Hoyt, Robert Nelson, S.B. 53 South 13th St., San José, Cal.
Student School of Public Health, 1915.
Health Officer, Manchester, N. H., 1916-17.
District Health Officer, California State Board of Health, 1917-.
- Knight, Herbert Wilcox, M.D. Mansfield, Pa.
Student School of Public Health, 1914-15.
- Landry, James Maguire Anthony, A.B., A.M. 117 North 3rd St.,
Wilmington, N. C.
Student School of Public Health, 1916-17.
Director of Laboratories, Consolidated Boards of Health, Wilmington,
and New Hanover County, N. C.
- Mackler, Max Joseph, Pharm.D., Ph.C. Portsmouth, Va.
Student School of Public Health, 1914-17.
Sanitarian, Norfolk County Board of Health, Portsmouth, Va.
- Mendelson, Ralph Waldo, M.D.
Student School of Public Health one term 1914-15.
Sanitary Inspector, American Red Cross Sanitary Commission in
Serbia, May, 1915-.
- Morris, Harry Rembert, A.B., M.D. 1325 32nd St., N., Birmingham,
Ala.
Student School of Public Health one term, 1917.
- Platt, Philip Skinner, A.B., A.M. 600 Webster Ave., Scranton, Pa.
Student School of Public Health, 1913-14.
With Commission for Relief of Belgium-Brussels, 1916-17.
Special Assistant, U.S. Embassy, Petrograd, 1917.
Commissioned as Captain, American Red Cross in France, 1917-.
- Saville, Charles, S.B. Dallas, Texas.
Student School of Public Health one term, 1914-15.
Director of Sanitation, Dallas, Texas, 1915-16, 1917-.
Director of Public Health, Dallas, Texas, 1916-17.

Songkla, Prince of, Mahidol of Siam. 11 Story St., Cambridge, Mass.
 Graduate of the Imperial Naval School, Kiel, Germany, 1913.
 Student School of Public Health, 1916-17.
 Student, Harvard Medical School, 1917-.

Stuart, Edward, S.B. State Department of Health, Harrisburg, Pa.
 Student School of Public Health one term, 1914-15
 Head of American Red Cross Sanitary Commission in Serbia, 1916-17.
 Chief of Division of Public Service, State Department of Health of Pennsylvania.

Tayntor, Lewis Olds, Ph.C. 280 Claremont Ave., Montclair, N. J.
 Student School of Public Health, 1915-17.

Woods, Marjory, A.B. Academy Ave., Sewickley, Pa.
 Student School of Public Health one term, 1917.

Wylde, Russell Arthur, A.B. 979 Essex St., Lawrence, Mass.
 Student School of Public Health one term, 1916.



SCHOOL OF PUBLIC HEALTH

Special Autumn Course
in
War Bacteriology for Women
Laboratory Technicians
in Army Hospitals



HARVARD UNIVERSITY
AND
THE MASSACHUSETTS INSTITUTE OF
TECHNOLOGY
1918

SCHOOL OF PUBLIC HEALTH

HARVARD UNIVERSITY
AND
THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

THE regular work of the School for the year 1918-19 will begin on September 30. Full particulars may be found in the Catalogue and Announcement, to be had on application to the *Director, School of Public Health, Harvard Medical School, Boston, Mass.*

In addition to the usual regular courses a Special Course in *War Bacteriology* designed primarily for *Women Laboratory Technicians in Army Hospitals* (but open also to men) will begin on September 30. This course will be in charge of Francis H. Slack, M. D., Instructor in the School and formerly Director of the Laboratory of the Boston Board of Health. It will occupy three afternoons each week from two to five o'clock, and will end about Christmas time, so that those who have satisfactorily completed it may be available for appointment to Government Service on or about January 1.

In order to pursue this course most advantageously, students should be at least eighteen years of age and if they have not already taken collegiate courses in Chem-

istry and General Bacteriology, opportunity will be given for pursuing these subjects at the same time as the Course in War Bacteriology. In case such parallel courses are necessary, residence until February 1 may be required, and additional fees must be paid.

The fee for the Course in *War Bacteriology* will be \$50, payable in advance. Those who satisfactorily complete the course will be practically sure of employment in the Laboratories of Army Hospitals, since the needs of the War Department for women Hospital Laboratory Technicians far exceed the supply. No women laboratory technicians are at present being assigned to foreign service.

A college degree, while desirable, is not required for admission to the course, and no diploma is given on its completion; but those who comply with all the requirements will be recommended to the Surgeon General of the Army for immediate appointment.

Inquiries may be directed to Prof. W. T. Sedgwick, Massachusetts Institute of Technology, Cambridge, but applications for membership in the course should be addressed to Prof. M. J. Rosenau, Director of the Harvard-Technology School of Public Health, Harvard Medical School, Boston.

SCHOOL OF PUBLIC HEALTH

Harvard University
and
The Massachusetts Institute of Technology

Announcement of Summer Courses

(Second Edition)

1918

SCHOOL OF PUBLIC HEALTH

HARVARD UNIVERSITY
AND
THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SUMMER COURSES, 1918

OWING to the great demand for trained laboratory workers, the School of Public Health of Harvard University and the Massachusetts Institute of Technology will offer the following courses during the summer of 1918.

These are designed to train physicians, college graduates and others having special qualifications, for laboratory positions. In addition to the regular laboratory courses indicated other courses in public health subjects will be given.

Increase in the opportunities offered women in the field of public health laboratory work has been very marked since the beginning of the world war and all of these courses are open to women. Such training will be given during the summer months as should enable them, upon its satisfactory completion, to take positions as laboratory assistants.

The tuition charges for the summer will depend on the amount of work taken, but will in no case exceed \$150. Work will begin on June 18th and continue until September 14th.

COURSES OFFERED

Sanitary Science and Public Health . . .	\$25.00	
Elementary Bacteriology	30.00	✓
Elementary Chemistry	30.00	✓
Organic Chemistry	25.00	
Vital Statistics	40.00	
Epidemiology and Industrial Hygiene..	25.00	
Personal Hygiene	25.00	
Municipal Sanitation	25.00	
Public Health Practice	25.00	
Military Hygiene	25.00	
Public Health Colloquium	25.00	
Preventive Medicine and Hygiene	50.00	
Public Health Laboratory Methods . . .	50.00	✓
Wassermann, Glanders and Rabies Lab- oratory Work	40.00	✓

In addition to the above, opportunity will be afforded to qualified students to do practical work in public health laboratories.

For further information address the Director, Harvard-Technology School of Public Health, Harvard Medical School, 240 Longwood Avenue, Boston, Mass.

